

THE COMMAND LINE

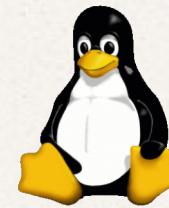
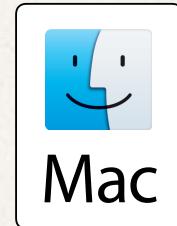
a.k.a The terminal

a.k.a. ‘My worst nightmare’ (but really?)



Goals for this session:

- What is the command line interface?
- Learn fundamental commands of a UNIX operating system
 - Basis for Mac and Linux operating systems

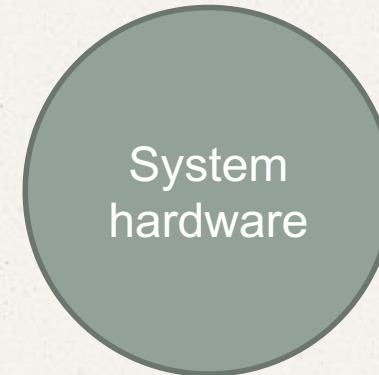


What is UNIX

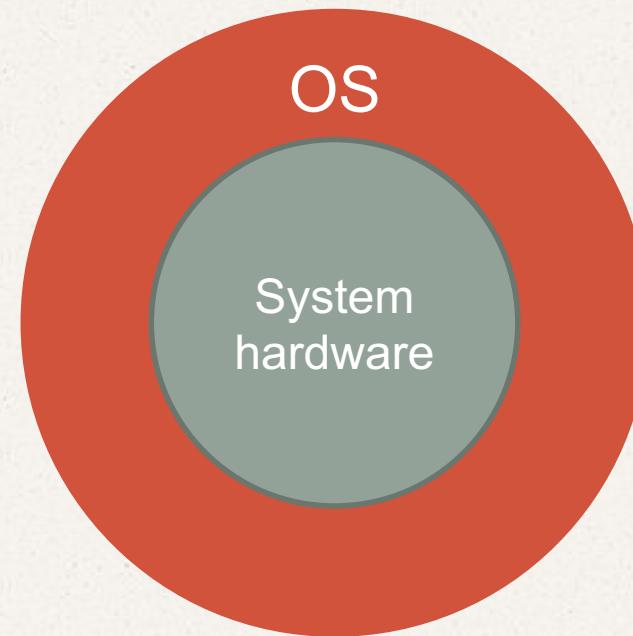
- An operating system
 - Developed in the 1960's by AT&T
 - Flexible and stable
 - Allows users to
 - Run Programs
 - Manage Resources
 - Access the folders and files
 - Communicate with other computer systems



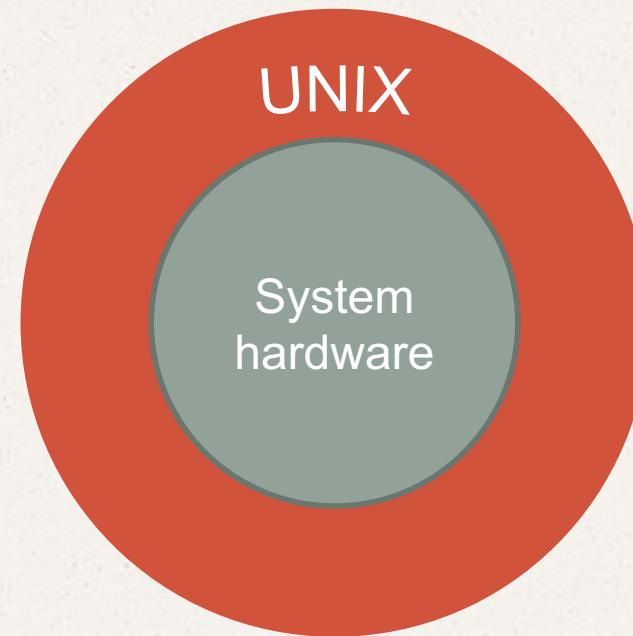
UNIX



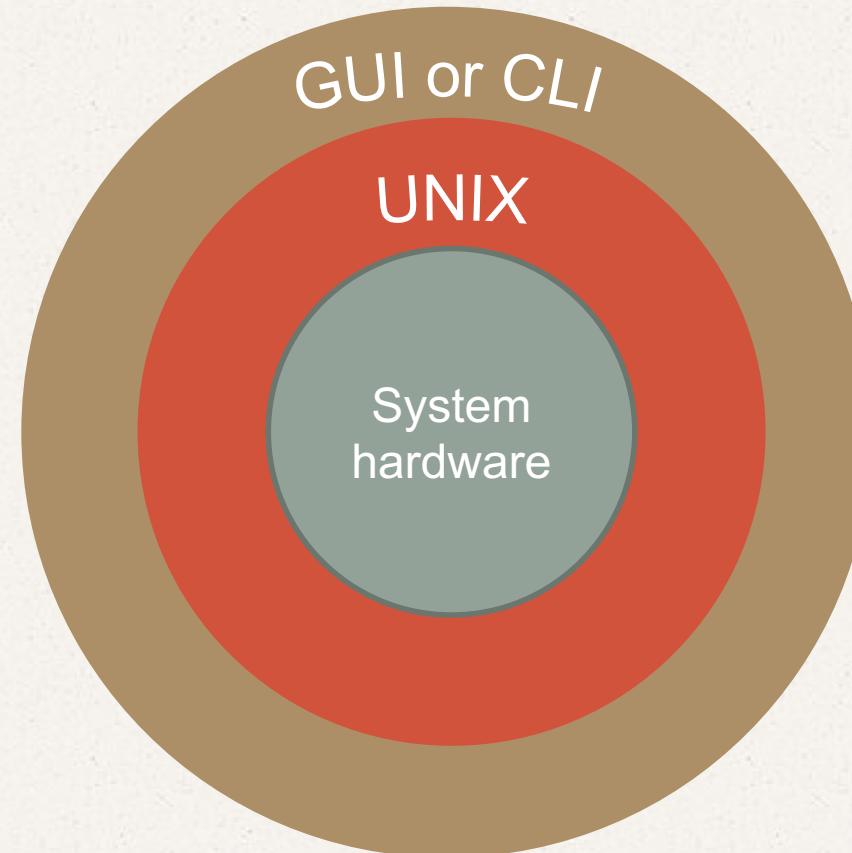
UNIX



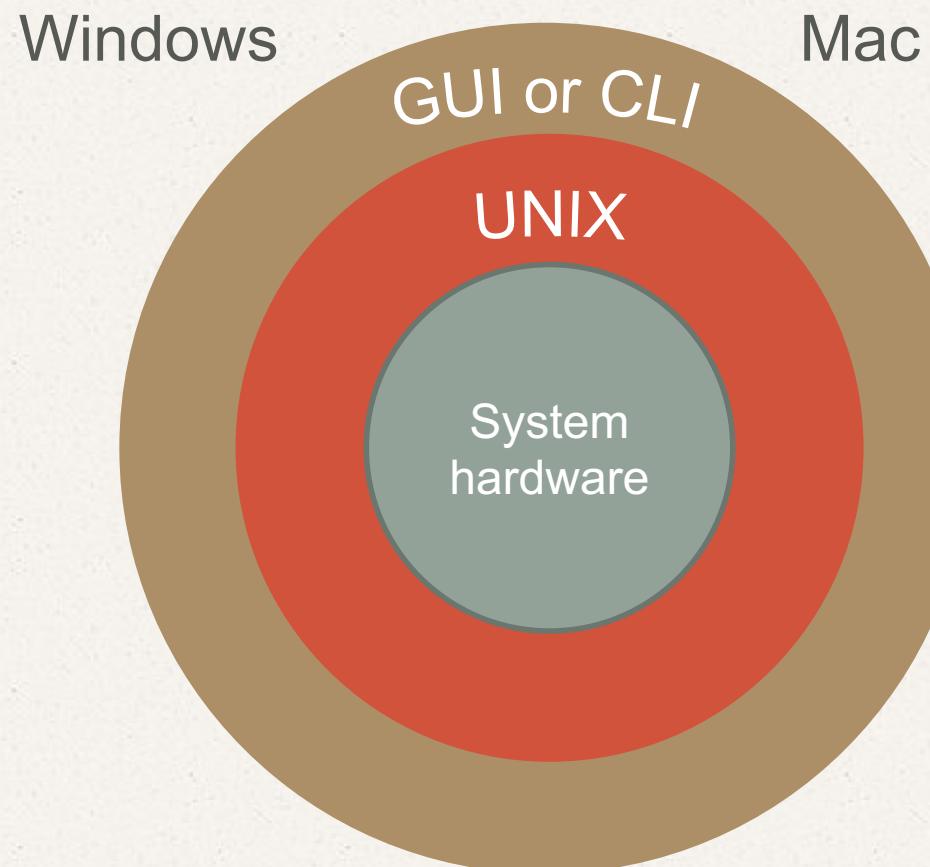
UNIX



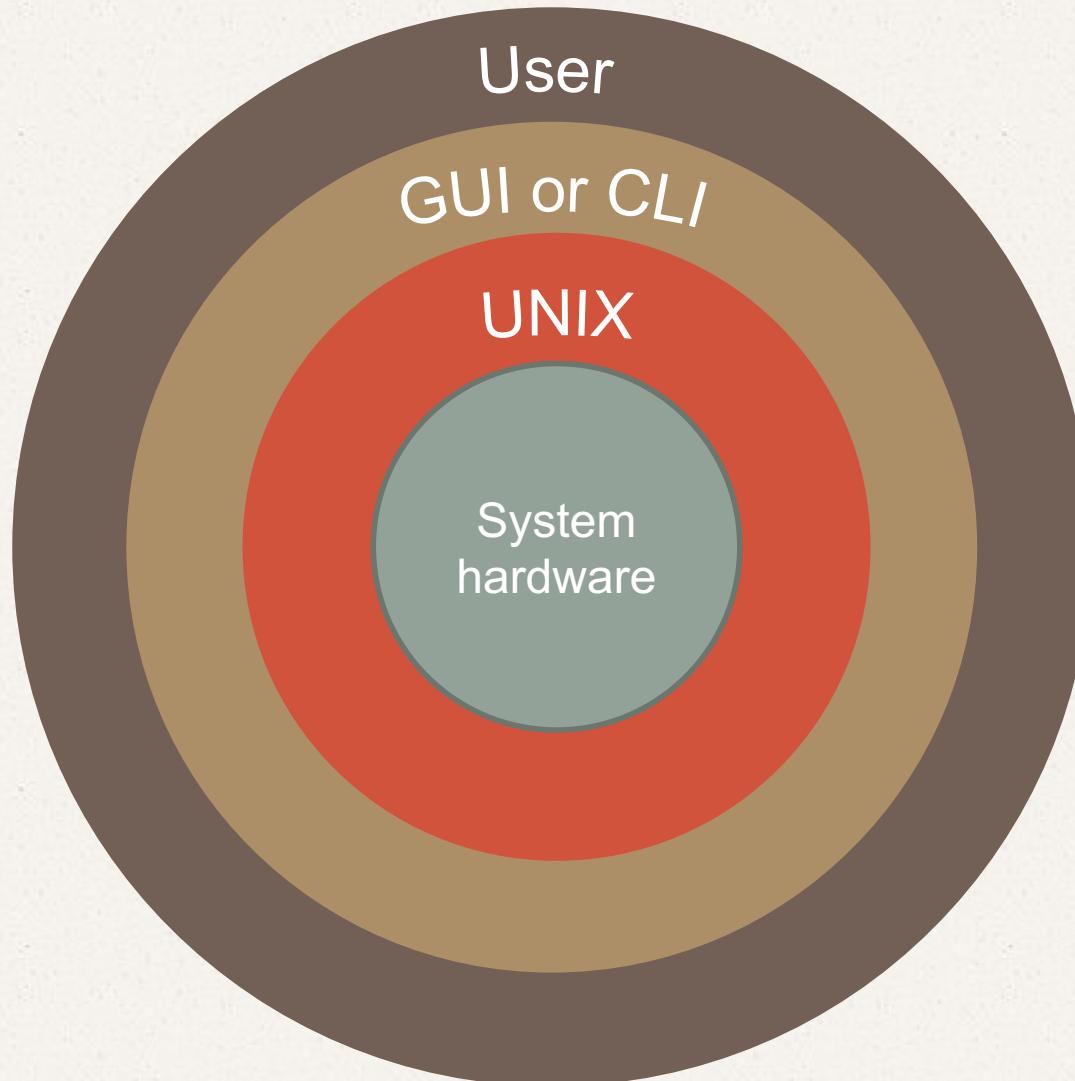
UNIX



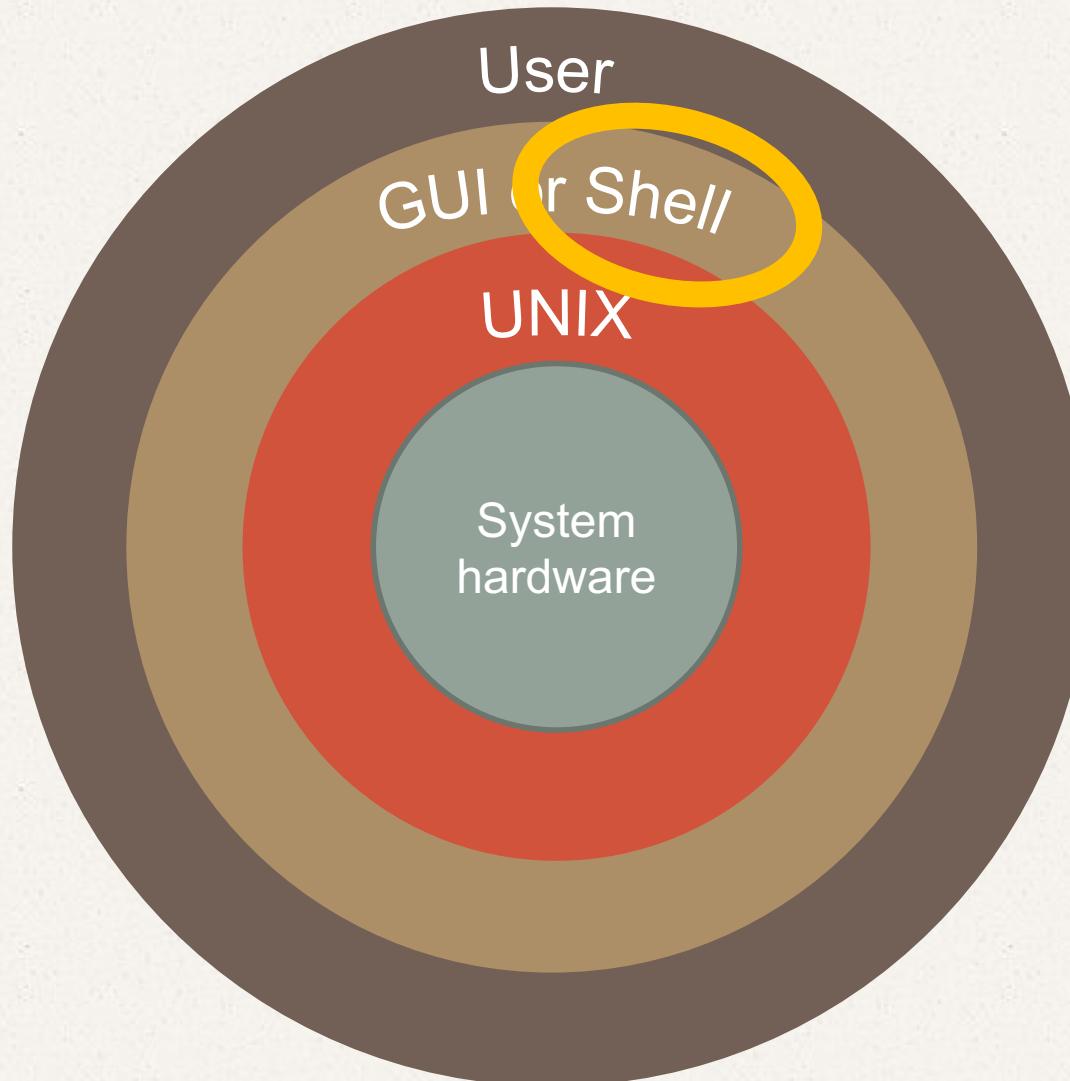
UNIX



UNIX



UNIX



The SHELL (terminal)

- The shell interprets text commands the user types and manages their execution
 - The shell communicates with the core operating system called the **kernel**
 - The most popular shells are: bash (default), tcsh, csh, korn
 - The differences are generally subtle
 - For this tutorial, we are using bash
- WARNING: Shell commands are **CASE SENSITIVE!**
 - So “cat” and “Cat” are two different things

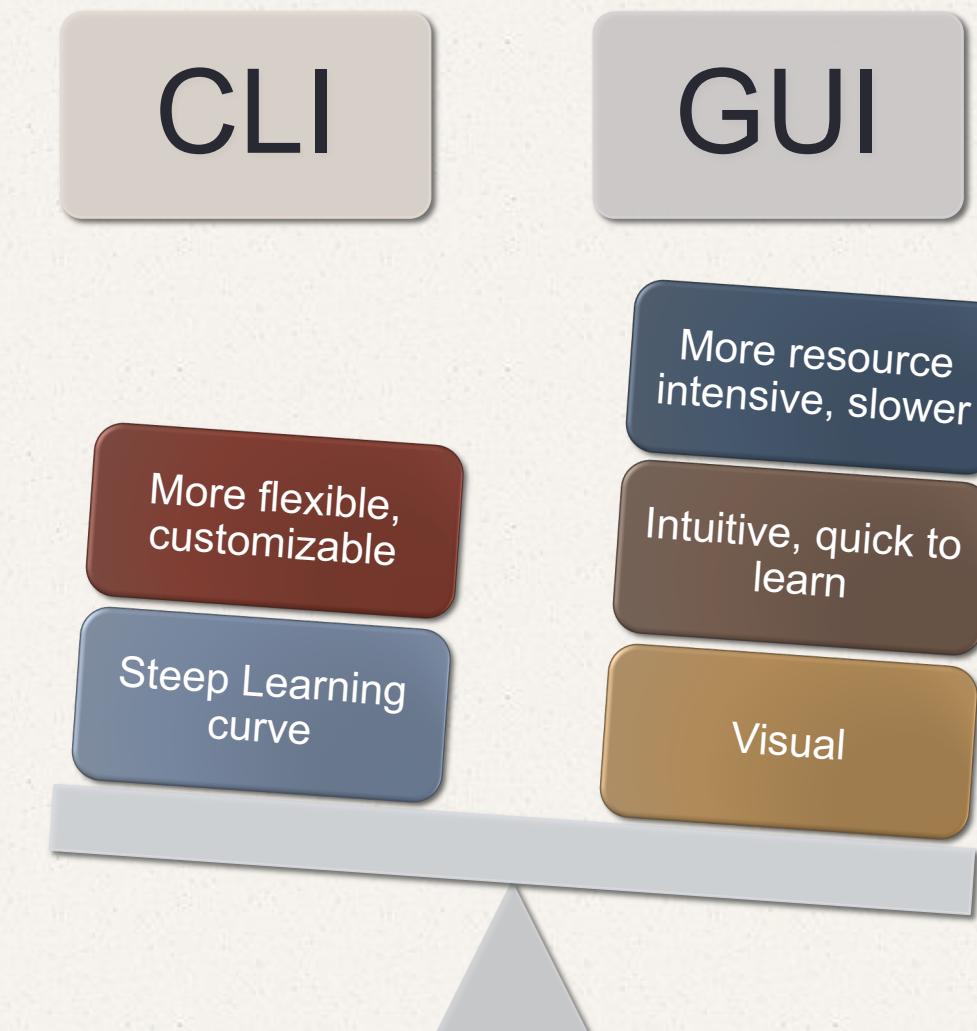


Command Line Interface (CLI): Advantages vs Disadvantages

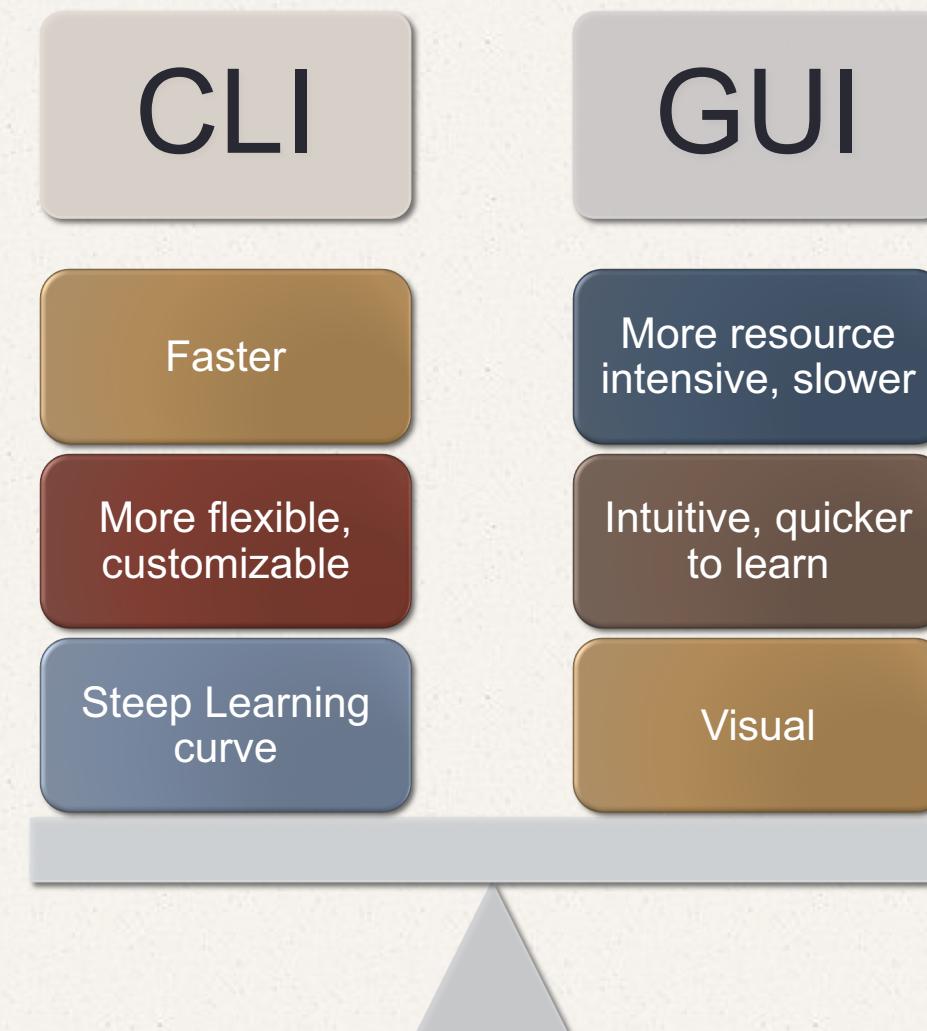
The slide illustrates a comparison between two user interfaces: a graphical user interface (GUI) and a command-line interface (CLI). On the left, the Windows 8 Start menu is displayed, featuring a grid of colorful tiles for various apps like Scanner, Games, Photos, Calendar, Word 2013, OneNote, Map, Internet Explorer, People, Calculator, Weather, Excel 2013, Outlook, Video, Mail, PC Settings, Reader, PowerPoint 2013, Visio 2013, More, Camera, Music, SkyDrive, Upload Center, Spreadsheet, and Desktop. On the right, a terminal window shows a command-line session. The terminal window has a dark background with white text. At the top, it shows the path 'gent/web/thebuggenie \$./tbg_cli remote:show_issue thebuggenie 389 --include_comments'. Below this, several lines of issue details are listed, including the title 'Add Bug Genie version to general tab of configuration page', creation date 'Tue, 15 Feb 2011 12:07:44 GMT (1297771664)', creator 'kantos01', update date 'Tue, 15 Feb 2011 12:07:44 GMT (1297771664)', assignee 'zegenie', status 'In progress', description ('I think it would be nice to see what version of Bug Genie you have installed ... sometimes the engineer upgrades the system overnight and does not tell me.'), and comments section. The comments section contains two entries: one from 'zegenie' at 12:26:25 GMT (1297772295) stating the issue was updated, and another from 'zegenie' at 12:26:39 GMT (1297772299) stating the user can see the version number via '/about'.



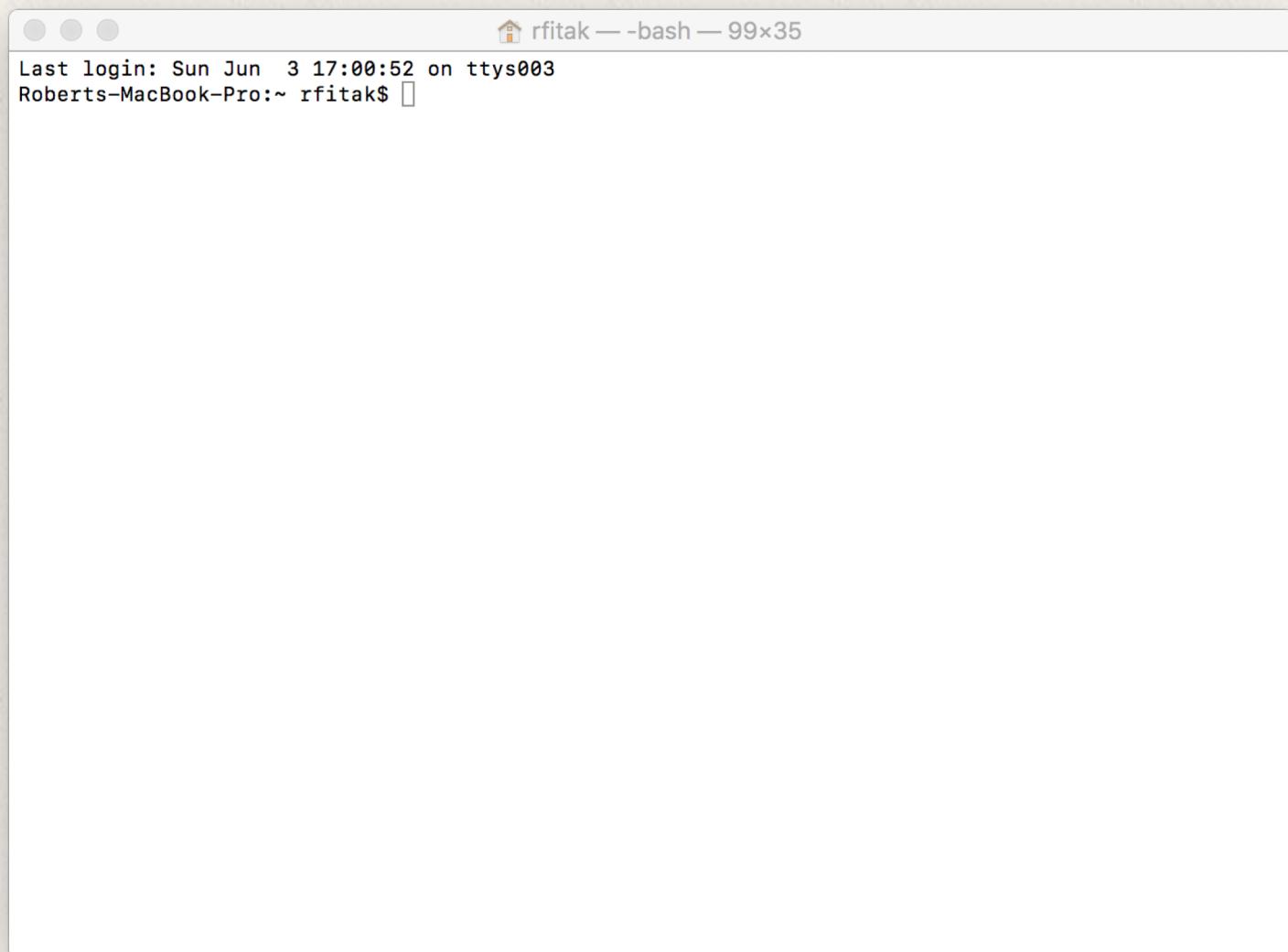
Command Line Interface (CLI): Advantages vs Disadvantages



Command Line Interface (CLI): Advantages vs Disadvantages



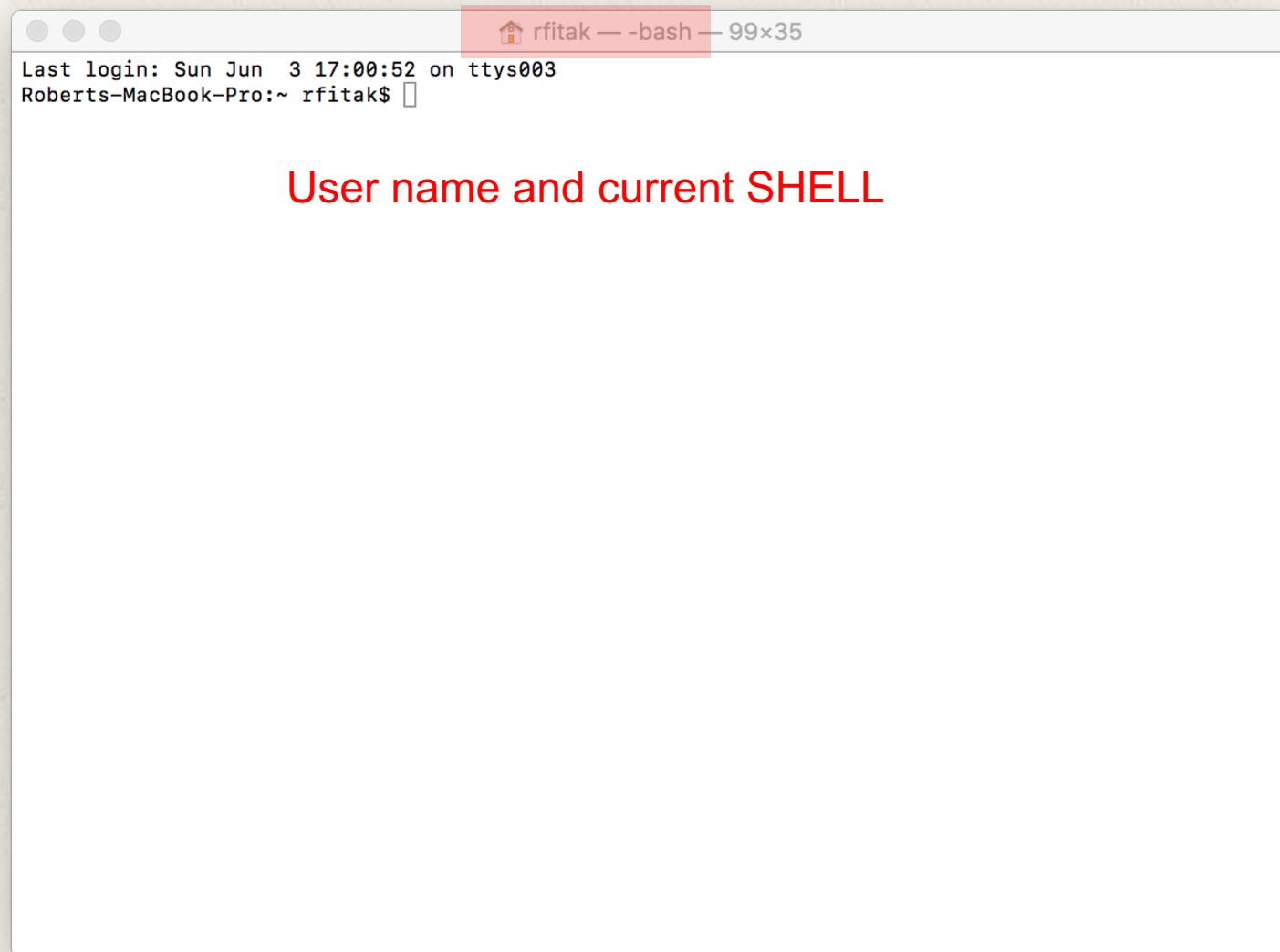
The terminal



```
Last login: Sun Jun 3 17:00:52 on ttys003
Roberts-MacBook-Pro:~ rfitak$
```



The terminal

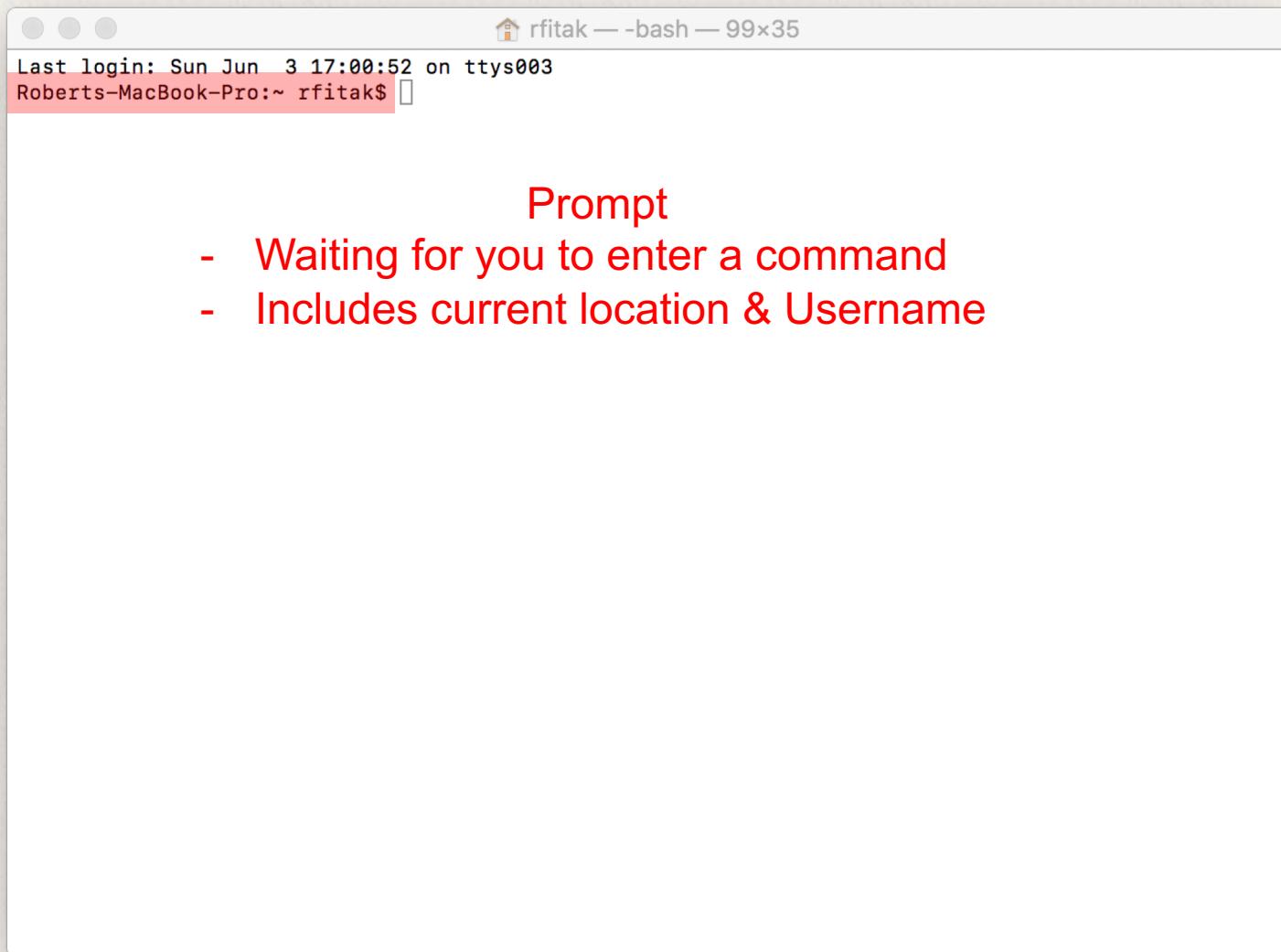


Last login: Sun Jun 3 17:00:52 on ttys003
Roberts-MacBook-Pro:~ rfitak\$

User name and current SHELL



The terminal



Prompt

- Waiting for you to enter a command
- Includes current location & Username



The terminal

```
Last login: Sun Jun 3 17:00:52 on ttys003
Roberts-MacBook-Pro:~ rfitak$
```

Commands get typed here

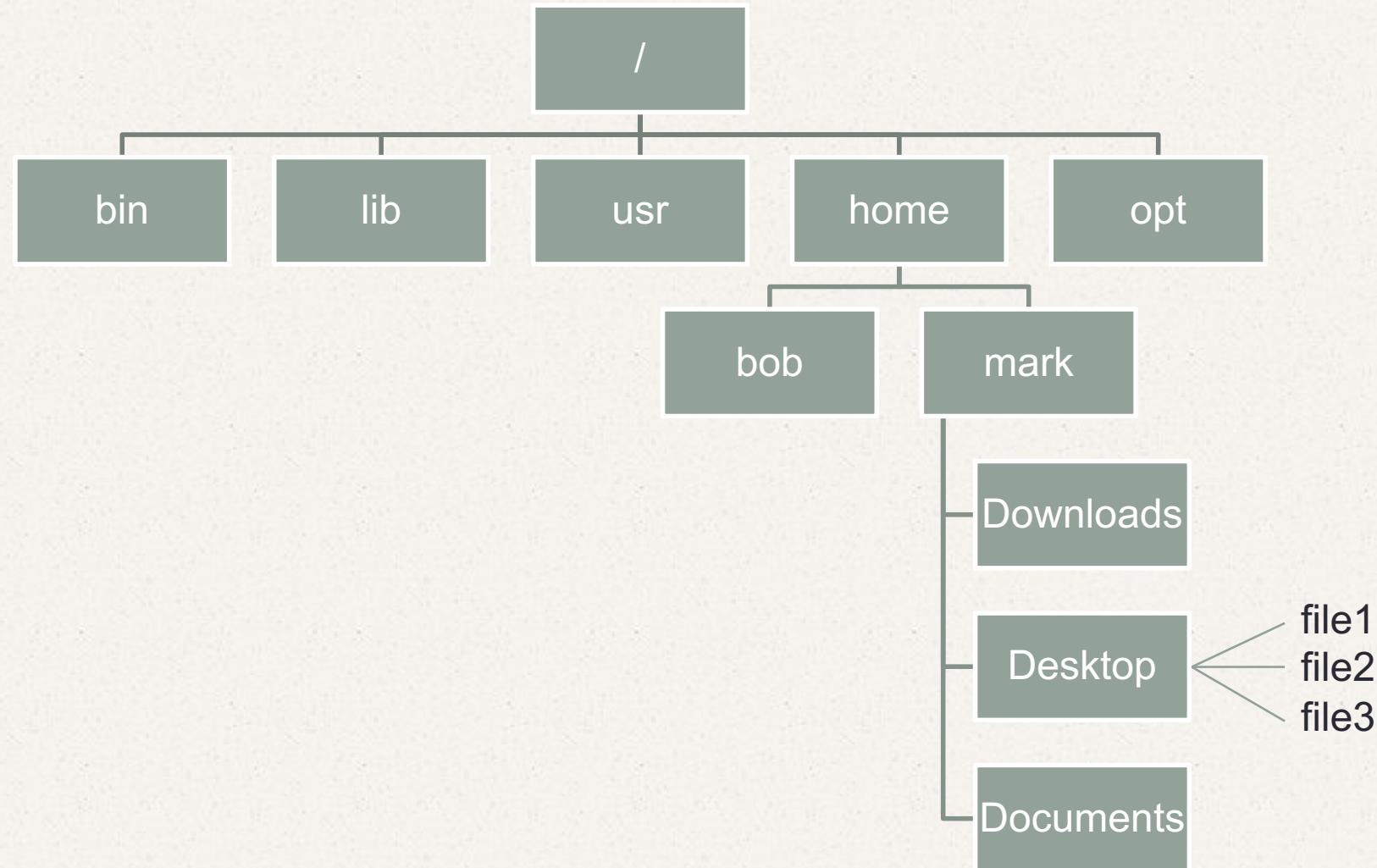


Commands

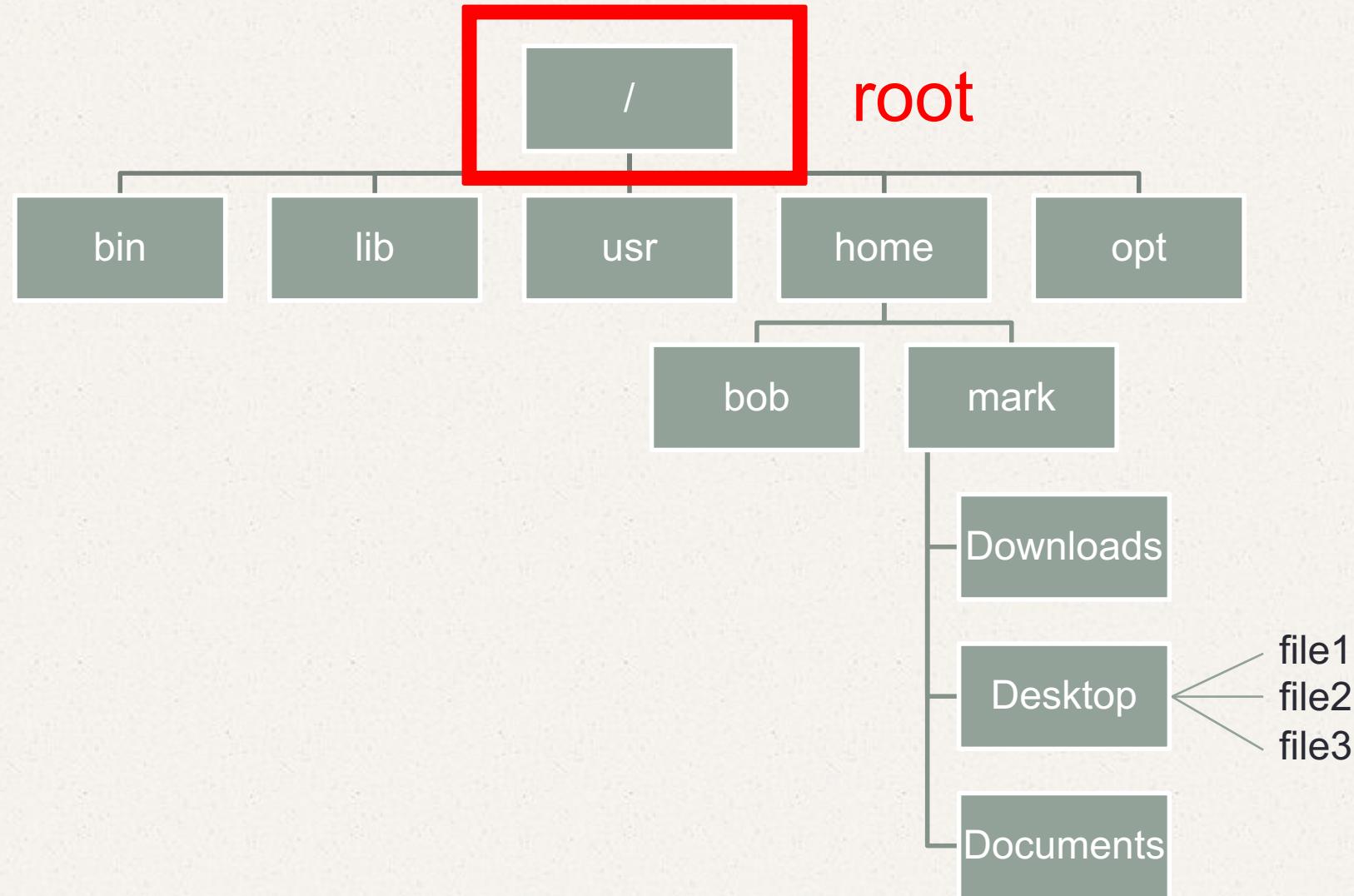
- UNIX commands can be very simple one word commands, or have many additional arguments (a.k.a. parameters).
- In general, a UNIX command has the following form:
command options(s) filename(s)
- The *command* is the name of the program that we are going to execute.
- The *options* modify the way the command works. Options are typically indicated by one or two hyphens: e.g. **-a** or **--input**.
- The *filename* is the last argument for many UNIX commands.



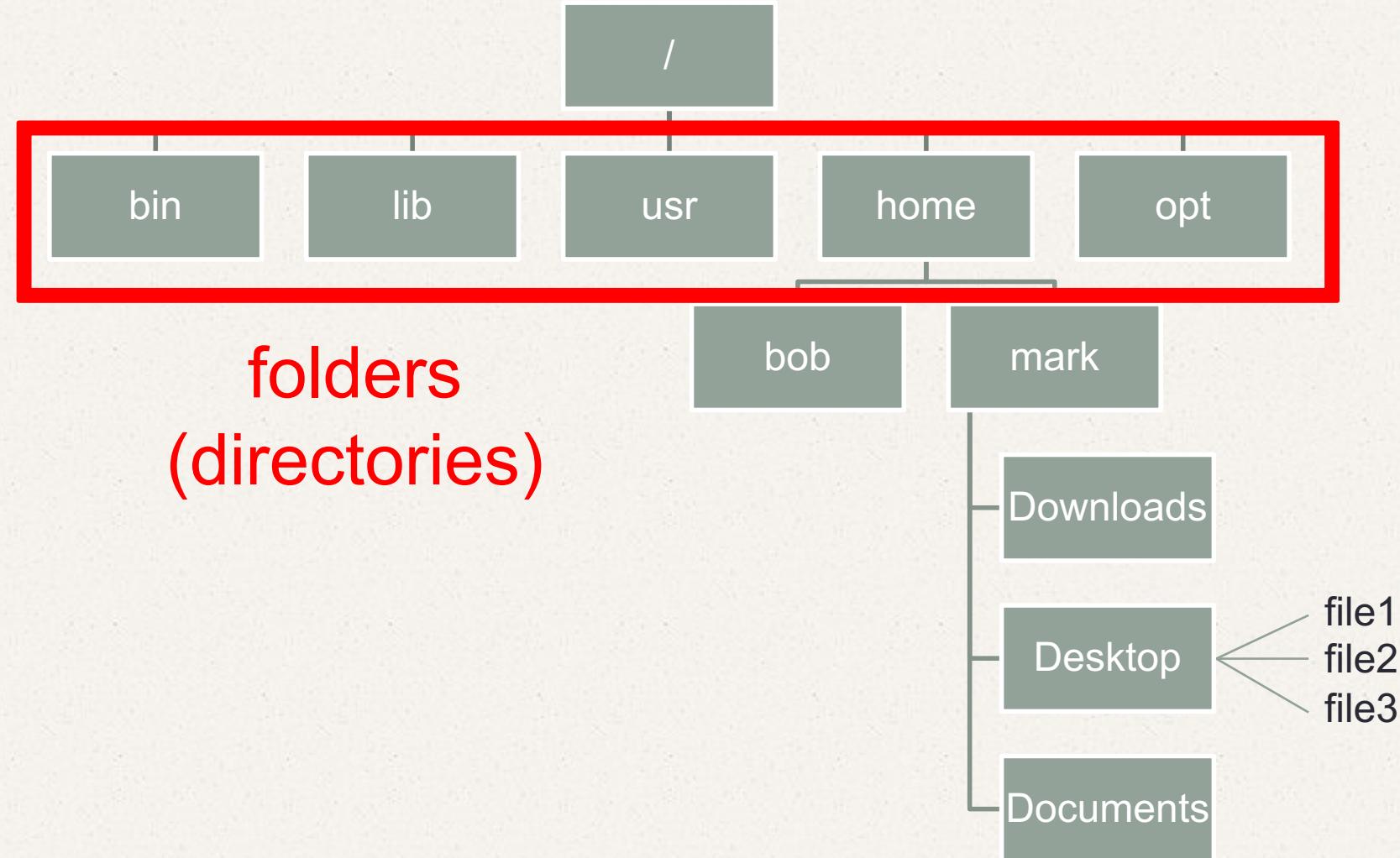
The file system



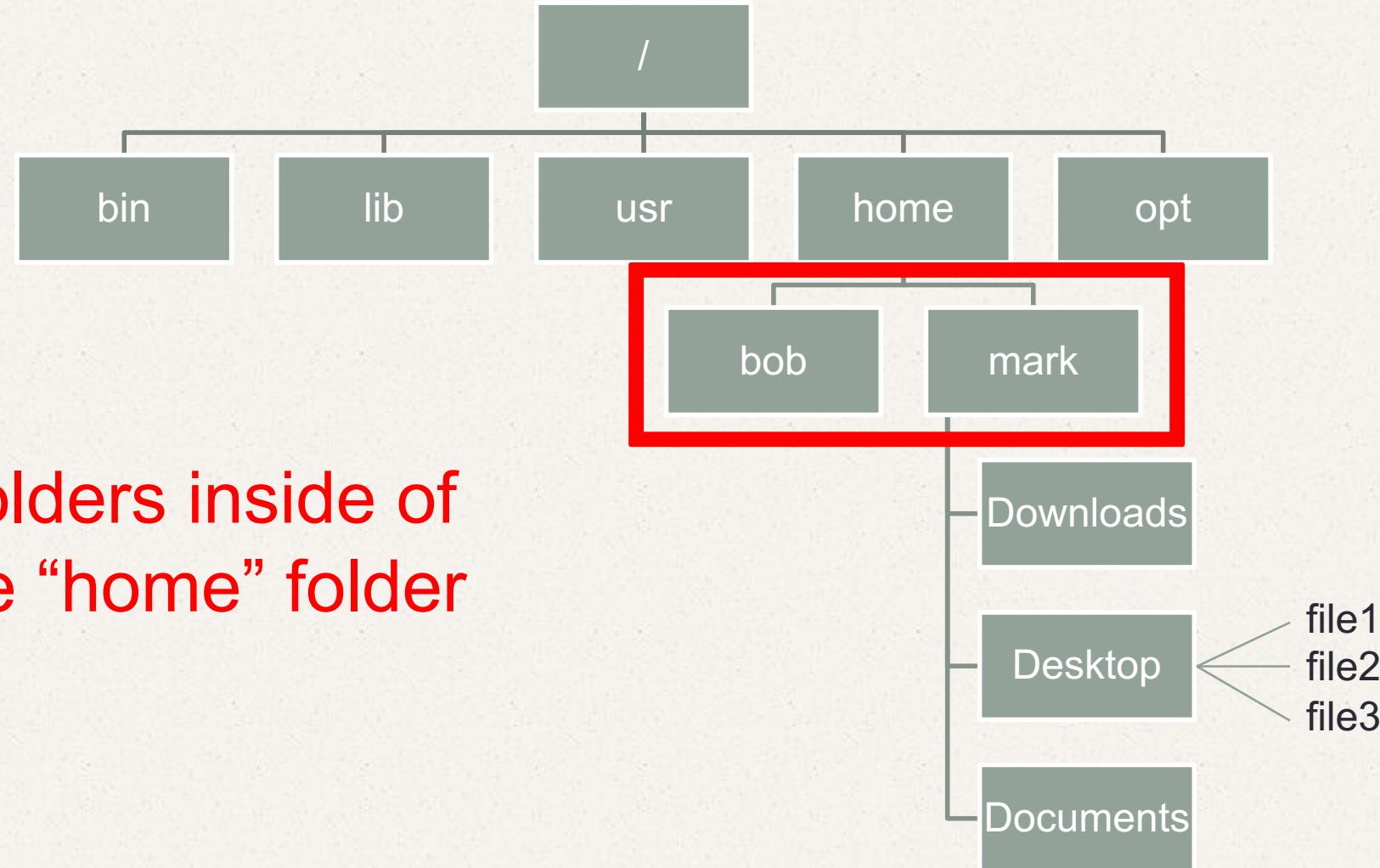
The file system



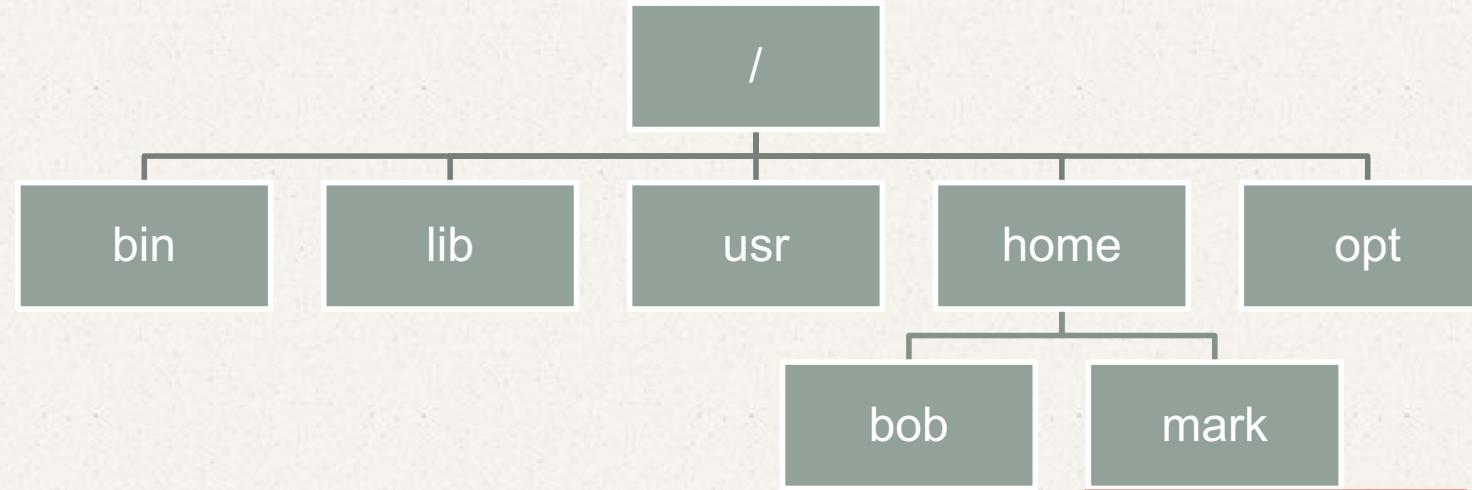
The file system



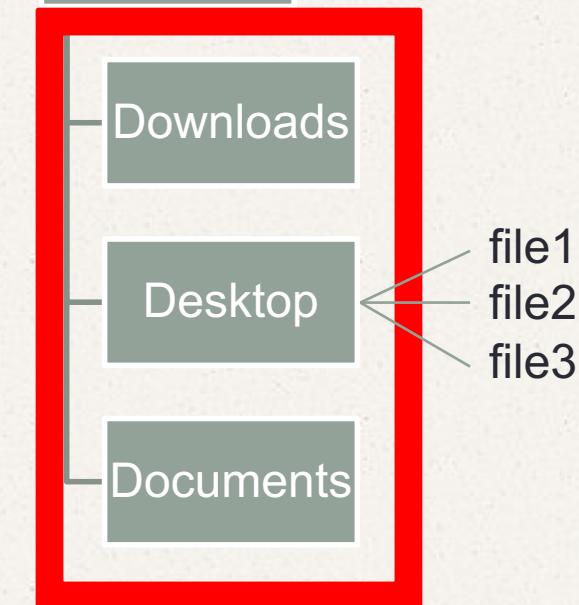
The file system



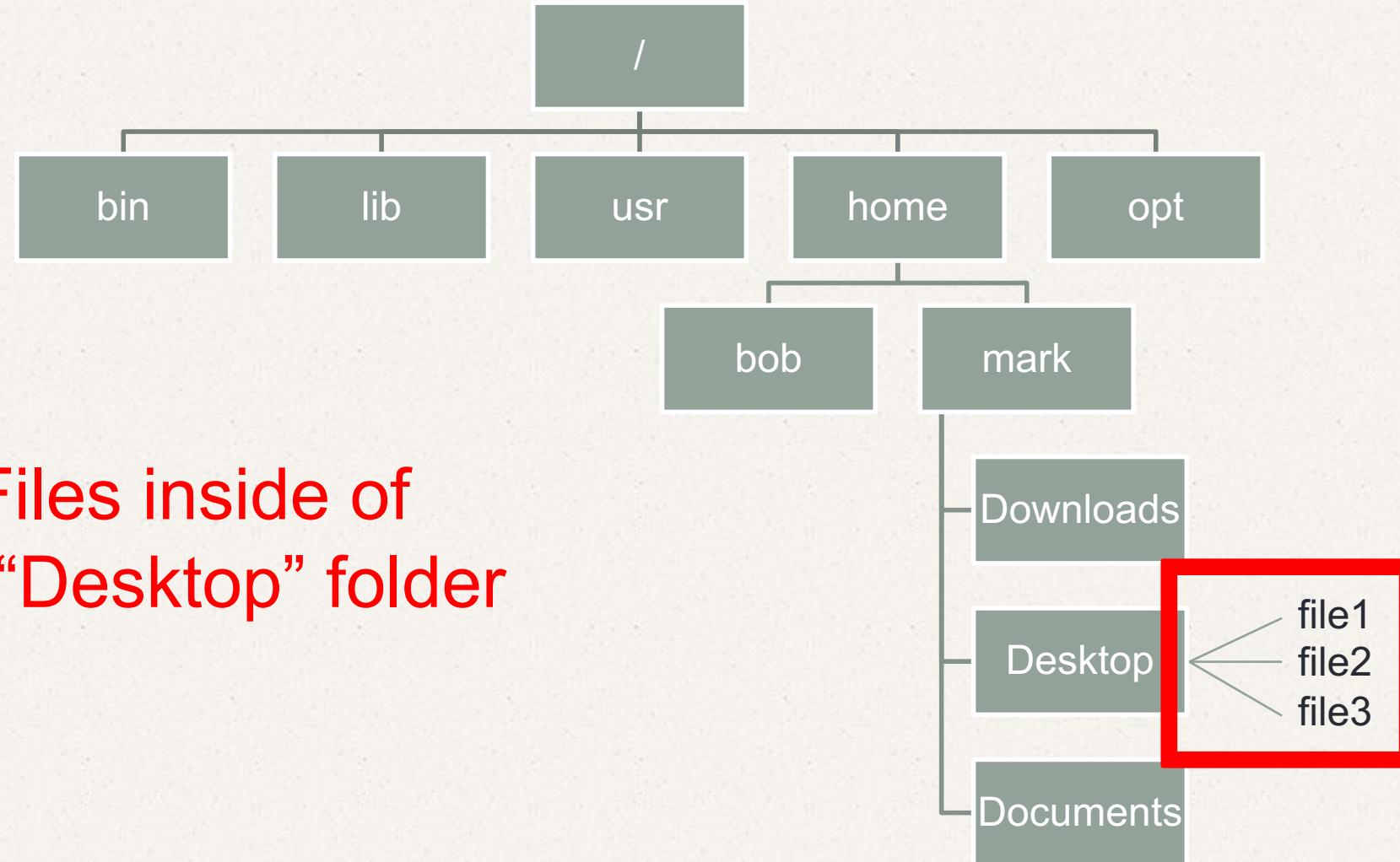
The file system



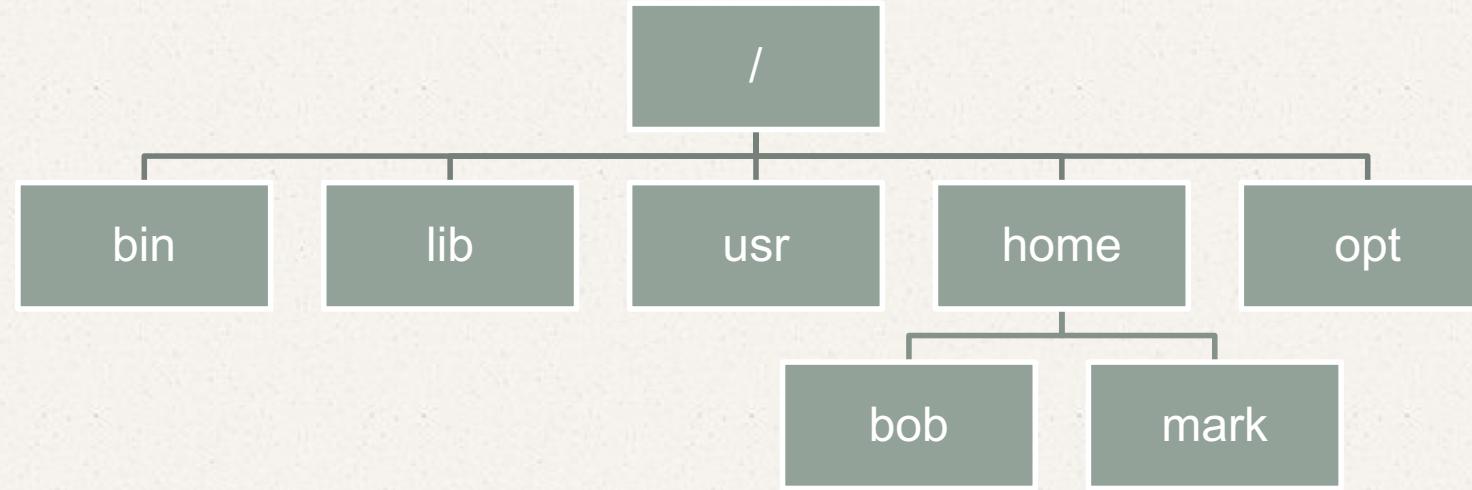
Folders inside of
the “mark” folder



The file system



The file system

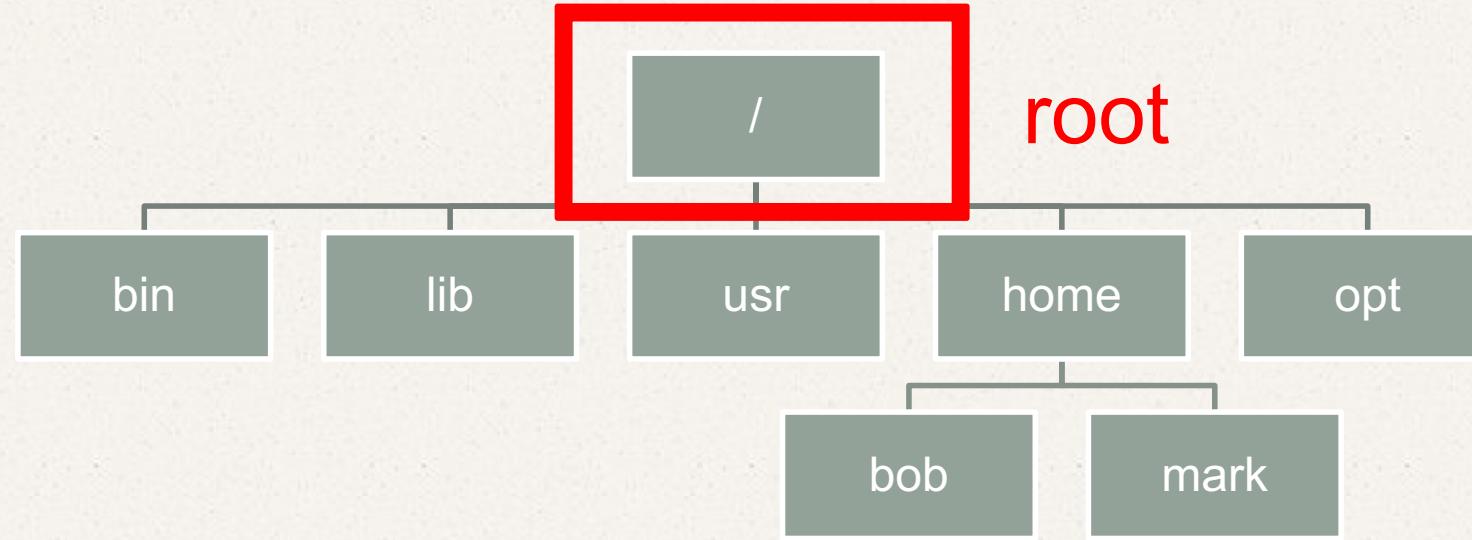


Now in text format:

```
/bin  
/lib  
/usr  
/home  
/opt  
/home/bob  
/home/mark  
/home/mark/Downloads  
/home/mark/Desktop  
/home/mark/Desktop/file1  
/home/mark/Desktop/file2  
/home/mark/Desktop/file3  
/home/mark/Documents
```



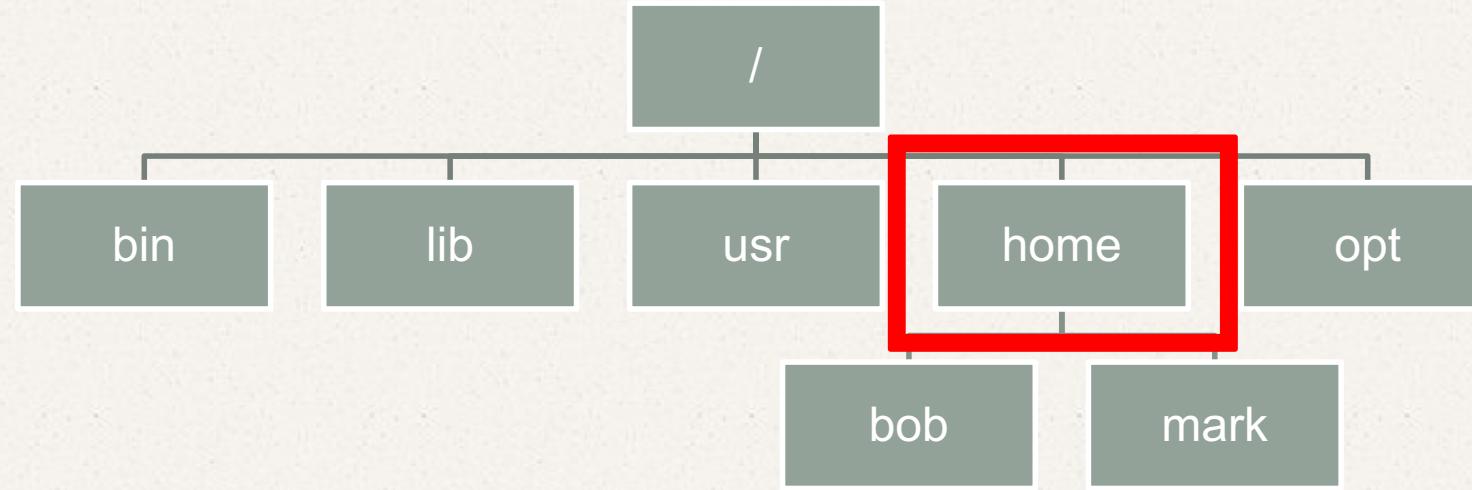
The file system



Now in text format:

/

The file system

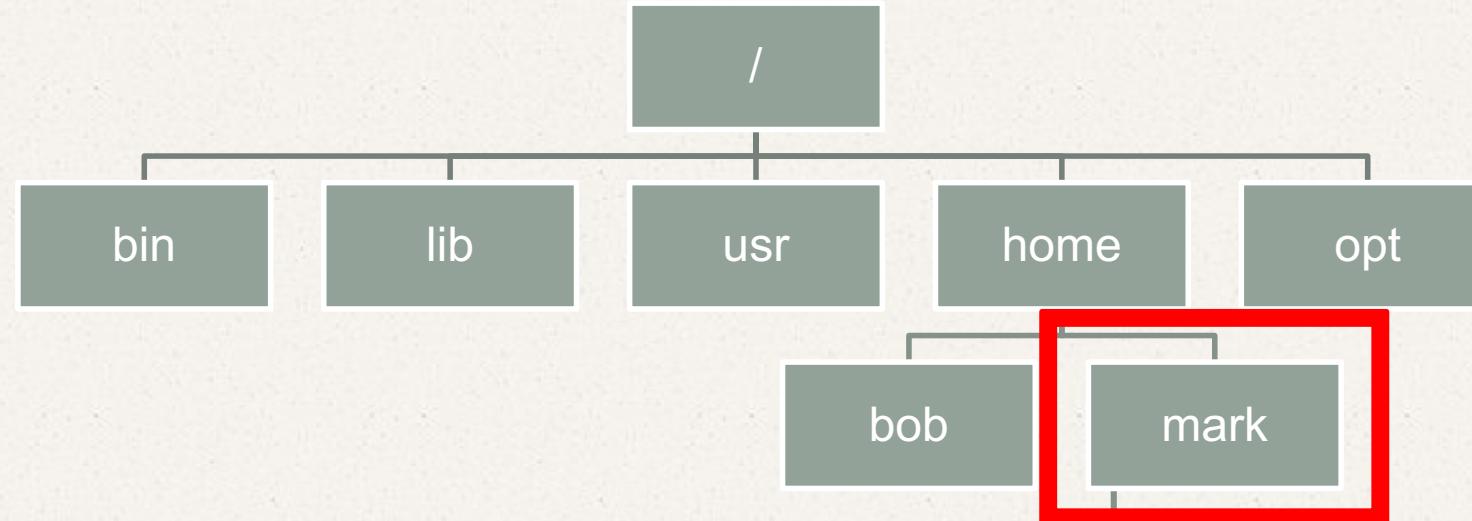


Now in text format:

/home

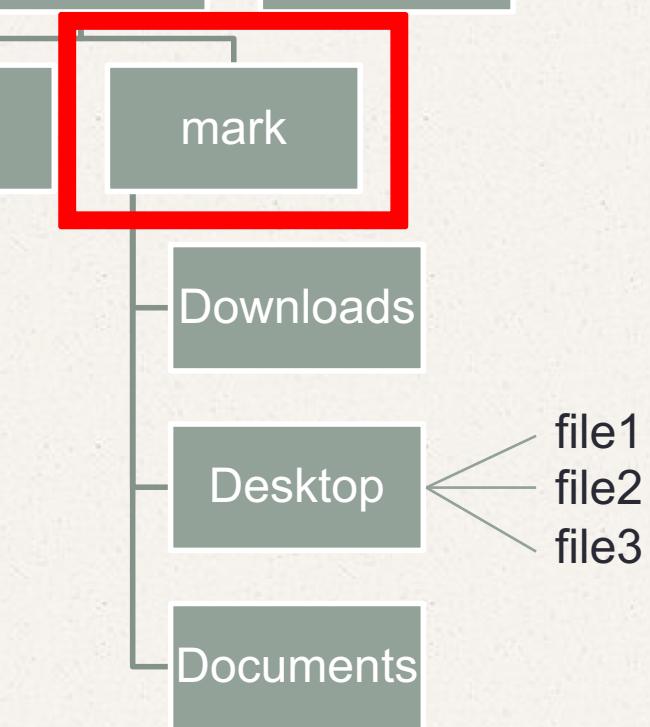


The file system

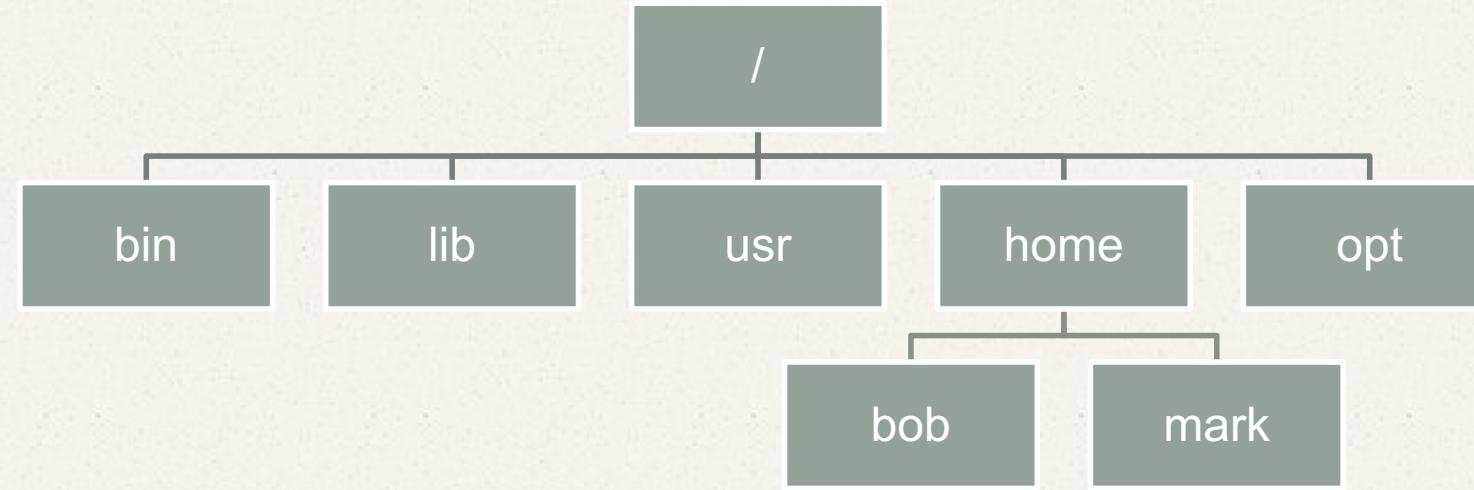


Now in text format:

/home/mark

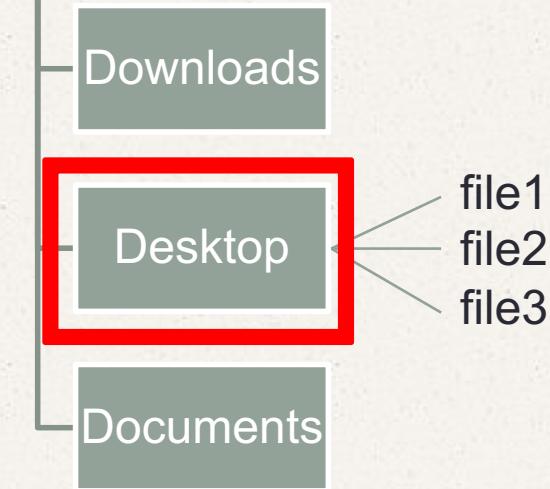


The file system

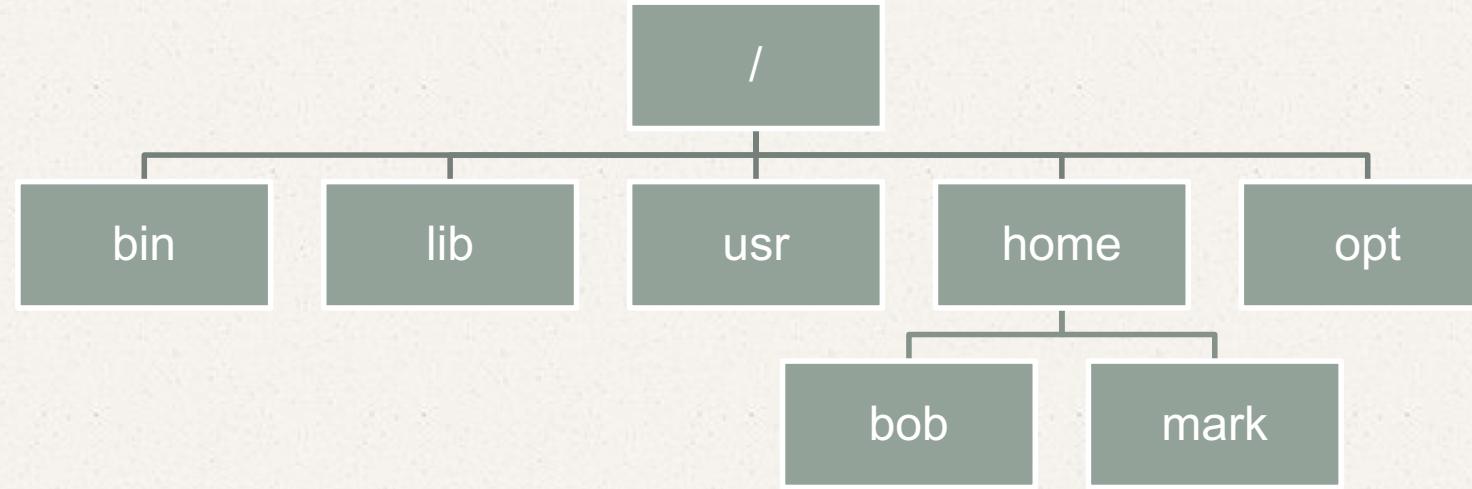


Now in text format:

/home/mark/Desktop



The file system

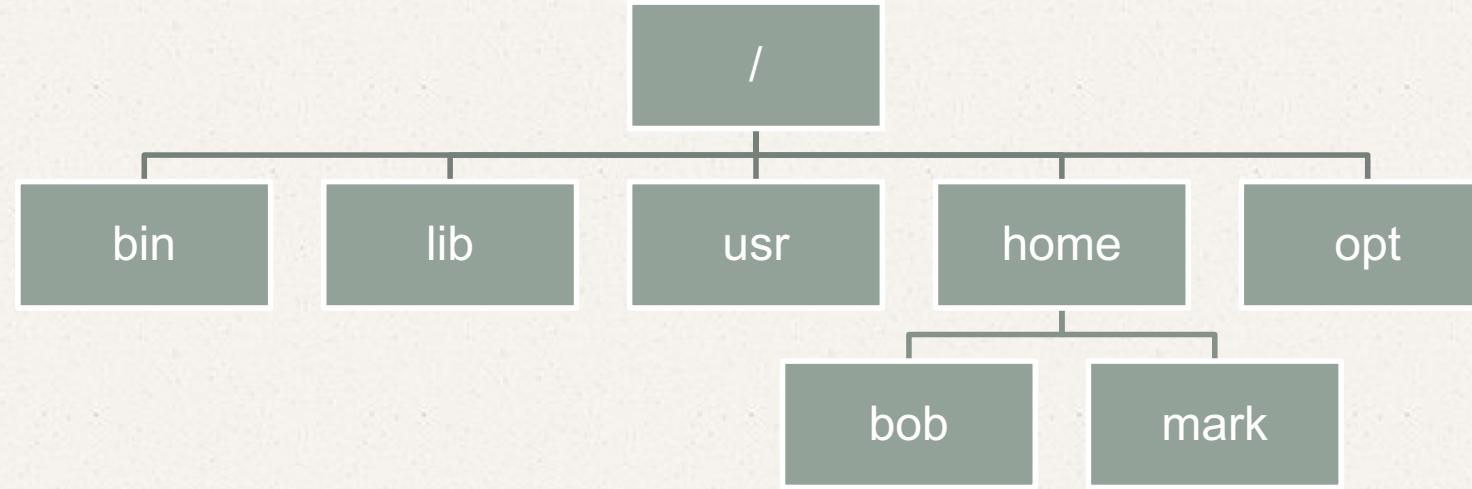


Now in text format:

/home/mark/Desktop/file2



The file system



Now in text format:

/home/mark/Desktop/file2

↑
path



TO YOUR TERMINALS!!!

